

REMARKS/ARGUMENTS

These remarks are made in response to the Office Action of March 17, 2009 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. However, the Examiner is expressly authorized to charge any deficiencies to Deposit Account No. 14-1437.

Specification

In the Office Action, the specification was objected to as failing to provide proper antecedent basis for the claimed subject matter, namely the “means for” recitations in Claim 37.

Although Applicants believe that the “means for” recitations are properly supported by the specification, Claim 37 has been cancelled in order to facilitate prosecution of the instant application.

Claim Rejections – 35 USC § 101

Claims 1-2, 4-6, 26-31, 37-39, and 41 were rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

More specifically, Claims 1-2, 4-6, 38, and 41 were rejected under 35 U.S.C. § 101 as not falling within one of the four statutory categories of invention. It was asserted that the claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter.

Applicants submit that a person of ordinary skill in the art would readily appreciate that practicable embodiments of the claimed invention would be conducted with the aid of a computing machine, such as a server. Such computing machines are commonly understood to have memory. Further, the operations recited in the claims clearly change the state of the underlying data since the cache, register, or other memory

on which the data is stored must be transformed to have a different magnetic polarity, electrical charge, or the like depending on the technology that is used. These are real physical changes. Further, memory is a real physical article. As such, Applicants submit that the method claims perform a transformation under the “machine or transformation” test and thus qualify as patent-eligible subject matter.

Regarding Claims 26 and 37, it was asserted that only if at least one of the claimed elements of the system is a physical part of a device can the system as claimed constitute part of a device or a combination of devices to be a machine within the meaning of 101.

Claim 26 has been amended to clearly recite at least one physical element. Claim 37, as discussed above, has been cancelled.

Claim Rejections – 35 USC §§ 102 & 103

Claims 26-28 and 31 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Published Patent Application 2004/0078424 to Yairi, *et al.* (hereinafter Yairi). Claim 30 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yairi in view of U.S. Published Patent Application 2005/0044197 to Lai (hereinafter Lai). Claim 39 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yairi in view of U.S. Published Patent Application 2004/0179668 to Gilbert, *et al.* (hereinafter Gilbert).

First, it is noted that the method claims and machine-readable storage claims have not been rejected over any cited references. Acknowledgement of the allowability of these claims is thus requested.

Second, it is noted that the present invention predates the cited references Yairi, Lai, and Gilbert. As stated in the declarations submitted with the response dated August 8, 2008, the present invention was conceived as early as October 15, 2002, which predates the effective date October 16, 2002 of Yairi, the effective date August 18, 2003 of Lai, and the effective date March 10, 2003 of Gilbert. Support evidence was also submitted with the response dated August 8, 2008 in support of conception, diligence and

constructive reduction to practice. Applicants, therefore, believe that Yairi, Lai, and Gilbert are not available as prior art references.

Third, although Applicants believe that the rejections are moot due to the non-availability of Yairi, Lai, and Gilbert as prior art references, Applicants have amended the claims in an effort to even more clearly define the present invention and to facilitate prosecution of the instant applications. As discussed herein, the claim amendments are fully supported by the original disclosure and no new matter has been introduced.

The Claims Define Over The Prior Art

As the Internet becomes increasingly pervasive in our daily lives, the use of software services, called Web services, within Internet-connected computing devices has increased in corresponding fashion. Web services, which are sometimes called application services, are services that are made available from a business's Web server for Web users or other Web-connected programs. Users can access web services directly from a central server or through a peer-to-peer arrangement. Some Web services can communicate with other services, thereby exchanging procedures and data with one another often with aid of a class of software known as middleware. See Specification, paragraph [0002].

Web services used within a household can integrate the functions of communication devices such as a television, stereo system, telephony system, and computer in a user-friendly and user specific manner. It should be noted that Internet related services are not restricted to services that enhance browsing and file transfer using a computer, but can include any Web based service utilized by any device or service provider. For example, a Web service installed within a telecommunication switch can enable a variety of telephony features such as conversation transcription, language translation, voice messaging, voice Internet browsing, audible email retrieval, and the like. In another example, a Web service used in conjunction with Internet radio can

permit a user's receiving device to time delay streamed radio content or to customize the stations, programs, and advertisements presented upon the receiving device in a user-specific manner. See Specification, paragraph [0003].

One challenge that Web service providers currently have involves network security issues. Web servers can function across a multitude of open, trusted, and secure networks. The different users of a Web service can have vastly different security requirements. It can be highly inefficient to implement security requirements at the Web services level as such security can potentially limit the environments in which the Web services can be installed. Further, the development time and resulting cost can be significantly greater when security overhead is handled at the level of individual Web services. See Specification, paragraph [0004].

One method used by service providers to bridge different networks involves the use of a gateway, such as a Parlay gateway. The Parlay gateway can be utilized by service providers as a "secure bridge" between untrusted networks, trusted networks, and secure networks. Conventional technologies, however, do not permit Web services to be provided in an open Internet environment when a Parlay gateway is involved. See Specification, paragraph [0005].

The present invention provides a method and a system for providing Web services. More specifically, the present invention can install one or more Web services within an environment that includes a gateway, such as an Open Services Architecture (OSA)/Parlay gateway. The gateway can permit Web services installed within a service environment to be accessed by an application server installed within an application environment. The application server can provide the functions and features of the Web service to a service user. In one embodiment, the application server can be a Web serving component of an integrated Web solution, such as WebSphere by International Business Machines, Corporation (IBM) of Armonk, N.Y. See Specification, paragraph [0006].

The gateway can handle protocol and security differences between the two environments and can integrate features of a Web service with other Web services and software routines. In one embodiment, the gateway can utilize at least two subcomponents to carry out these tasks. One subcomponent can be specific to a designated Web service. The other subcomponent can interface with multiple different Web services of a common type having common functions, thereby being a component with a generalized functionality instead of one uniquely tailored for a discrete service. Data can be exchanged between the gateway and an application server disposed within the application environment via a protocol such as the Internet Inter-ORB Protocol (IIOP) that conforms to the Common Object Request Broker Architecture (CORBA). See Specification, paragraph [0007].

One aspect of the present invention can include a method for providing Web services. The method can include the step of registering a Web service with a service provider. The Web service can be installed within a service environment. A request for the Web service can be sent from a service user and received by an application server disposed within an application environment. The application environment can specify a different network space than the service environment. For example, the application environment can be an open Internet environment and the service environment can be a trusted network environment and/or a secure network environment. The application server can transport service data for the requested Web service between itself and the service user. In one embodiment, the Web service can be registered with a service registry, where the received request can result from the service user selecting the Web service from the service registry. See Specification, paragraph [0008].

In a particular embodiment, at least one Java servlet can be executed within the application environment responsive to receiving the request for the Web service. The servlet can initiate the appropriate Web service installed within the service environment. The requested Web service can be accessed across a gateway, such as a Parlay gateway.

In one embodiment, the access across the gateway can involve the initialization of a component of the gateway that is specific to the Web service. Further, another component that is applicable to multiple Web services can be initiated as appropriate. Information can be conveyed between the gateway and the application server using a CORBA compliant protocol. See Specification, paragraph [0009].

Another aspect of the present invention can include a system for providing Web services. The system can include a client application, an application server, and a gateway. The client application can execute at least one Web service, which can have an associated service description written in a Web Service Definition Language (WSDL). The application server can distribute the Web service to the client application. In a particular embodiment, the application server can include an application engine and/or a component engine; the application engine can execute modular server-side applications; and, the component engine can provide one or more interface routines used by the application engine. See Specification, paragraph [0010].

The gateway can exist between the application server and a network location in which the Web service is installed. In one embodiment, the gateway can be a Parlay gateway. The gateway can include a function specific component configured for a particular Web service and a service component configured for a multitude of Web services. In another embodiment, a communication link, which can exchange Web service data using CORBA objects, can exist between the gateway and the application server. See Specification, paragraph [0011].

Yairi discloses a method and system for accessing one or more Web services (WS) from a mobile terminal using an instant messaging (IM) client. Each Web service appears to the IM client as a virtual IM user with whom the IM client can communicate. When the IM client requests to communicate with a Web service virtual user, the IM message is routed through a mobile IM server to an IM/WS gateway, which obtains a description of the requested Web service, prompts the IM client for any required Web

service input, and composes a Web services formatted message to send to the Web services provider. When the IM/WS gateway receives a response back from the Web service, the IM/WS gateway translates the response into one or more IM messages and sends the IM message(s) to the requester IM client. The IM/WS gateway can combine Web services to provide a higher value service to an IM user. The operator's value added services, such as billing and location, can be used in these types of composite services. See the Abstract.

Clearly, the subject matter of Yairi, which concerns accessing one or more Web services from a mobile terminal using an instant messaging (IM) client, is totally different from the subject matter of the present invention, which concerns enabling Web services installed within a service environment to be accessed by an application server installed within an application environment.

More particularly, Yairi does not disclose the concept of using a gateway to bridge the application environment, which is an open Internet environment, and the service environment, which is at least one of a trusted network environment and a secure network environment. In Yairi the IM/WS gateway acts as an intermediary between IM users and Web services, not between an open Internet environment (in which the application server is installed) and a trusted and/or secure network environment (in which Web services are installed) as in the present invention.

Yairi also does not disclose that the gateway comprises a function specific component configured specifically for the requested Web service and a generic service component that is applicable to multiple Web services. The Web service proxy 103 and the Web service broker 105 as shown in Fig. 1 of Yairi are not a function specific component in the sense of the present invention. As described in paragraphs [0028] and [0029] of the specification of the instant application:

[0028]Each function specific component 235 can be specific to installed services. For example, one function specific component 235 can be

associated with service 245, another can be associated with service 255, and another can be associated with service 265. The service components 240 can be generic in nature and can be used to interface with a variety of different services.

[0029] For example, in one configuration, service 245 and service 255 can be tax related Web services and the service components 240 can be a tax calculation component that can be used by service 245 and service 255. In another configuration, service 245, service 255, and service 265 can be call-waiting services and the service components 240 can be a generalized call waiting routine used by all three services.

In Yairi, the Web service proxy 103 is responsible for translating messages between IM format and each Web service's format, and the Web service broker 105 is responsible for advertising, discovery, and managing available Web services. Neither the Web service proxy 103 nor the Web service broker 105 is part of the requested Web service.

Accordingly, Yairi fails to disclose or suggest each and every element of Claims 1, 26, and 32. Applicants therefore respectfully submit that Claims 1, 26, and 32 define over the prior art. Furthermore, as each of the remaining claims depends from Claims 1, 26, or 32 while reciting additional features, Applicants further respectfully submit that the remaining claims likewise define over the prior art.

Applicants thus respectfully request that the claim rejections under 35 U.S.C. §§ 102 & 103 be withdrawn.

CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the

Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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